at least one compressor in fluid communication via a conduit between said source of air and at least one [power] cylinder inlet port;

at least one air cooler interconnected between said compressor and said inlet port;

[means for controlling operation of said compressor and said intake valves and for controlling air charge characteristics selected from one or more of turbulence, density, pressure, temperature, and the mean and peak pressure within said cylinder;] and

means for directing low pressure air to [a first] one of said inlet [port] ports during [the] an intake stroke of the piston and for directing air highly compressed by [a] said compressor to [a second] the other of said inlet [port] ports [after said piston has passed bottom dead center and has begun] during [the] a compression stroke of said piston.

34. (Twice Amended) In an internal combustion engine having a crankshaft driven by at least one piston moving through at least a compression stroke and an [expansion] intake stroke aided by combustion taking place within a cylinder, wherein the compression stroke results in the compressing of air within the cylinder, the improvement thereto comprising:

an external compression stage in which a secondary air charge is compressed outside the cylinder;

delivery conduit linking said external compression stage to the cylinder, with an intercooler through which said secondary air charge is selectively directed from said external compression stage;

two [power] cylinder intake ports with an intake valve in each port;

[means for selectively controlling the external compression stage and said intake valves, and for selectively controlling the air charge characteristics selected from one or more of turbulence, density, pressure, temperature and the mean and peak pressure within said cylinder;] and

means for directing low pressure air to [a first power cylinder inlet port] one of said intake ports during the intake stroke of the piston and for directing highly compressed air to [a second power cylinder inlet port] the other of said intake ports [after said piston has reached bottom dead center] during the compression stroke of the piston.

35. (Twice Amended) The improvement of Claim 34, further comprising

a second external compressor in which said low pressure air charge is lightly compressed outside the cylinder and conduit directing said air charge from said second external compressor through an air cooler to [the] a low pressure port of the [power] cylinder during the intake stroke.

38. (Twice Amended) An internal combustion engine, comprising:

an engine block defining at least one cylinder therein, first and second inlet ports communicating between said cylinder and a source of air, and an exhaust port through which air is exhausted from said cylinder;

a piston movably mounted within said cylinder;

an intake valve selectively occluding each said intake port;

an exhaust valve selectively occluding said exhaust port;

means for directing air at a first pressure to said first inlet port and for directing air at a second pressure, different from said first pressure, to said second inlet port during a compression stroke of the piston.

~~39.~~ (Amended) An internal combustion engine, comprising:

an engine block defining at least one cylinder therein, first and second inlet ports communicating between said cylinder and a source of air, and an exhaust port through which air is exhausted from said cylinder;

a piston movably mounted within said cylinder;

an intake valve selectively occluding each said intake port;

an exhaust valve selectively occluding said exhaust port; and

a first compressor directing air at a first pressure to said first inlet port and a second compressor directing air at a second pressure, different from said first pressure, to said second inlet port during a compression stroke of said piston.

49. (Amended) The improvement of Claim 25, further comprising a second external compressor in which said low pressure air charge is lightly compressed outside the cylinder and conduit directing said air charge from said second external compressor through an air cooler to [the] a low pressure port of the [power] cylinder during the intake stroke.

Please delete claims 26, 31 and 43 without prejudice.

Please add the following new claims 52 and 53:

52. (New) The engine of Claim ~~25~~, further comprising means for controlling operation of said compressor and said intake valves and for controlling one or more air charge characteristics selected from the group consisting of turbulence, density, pressure, temperature, and the mean and peak pressure.

~~53.~~ (New) An internal combustion engine, comprising:

an engine block defining a least one cylinder therein, a first inlet port through which air is introduced to said cylinder, a second inlet port through which air is introduced to said cylinder, and an exhaust port through which exhausted gases are expelled from said cylinder;

a piston movably mounted within said cylinder, said piston moving through at least one intake stroke and one compression stroke;

a first intake valve selectively opening and closing said first inlet port, said first intake valve opening said first inlet port during at least a portion of said intake stroke;

a second intake valve selectively opening and closing said second inlet port, said second intake valve opening said second inlet port during at least a portion of said compression stroke;

an exhaust valve selectively opening and closing said exhaust port;

first conduit communicating said first inlet port to air at a first pressure; and